

Benhao Huang

🐶 huskydoge.github.io

✉ hbh001098hbh@sjtu.edu.com

🌐 <https://github.com/huskydoge>

EDUCATION

• Shanghai Jiao Tong University

Shanghai, China

Bachelor of Engineering, Electronic Information (IEEE pilot class)

Sept 2021 - Current

- ▶ **Overall GPA:** 92.66/100.00, 4.04/4.30, (Rank 6/129)
- ▶ **Selected Courses:** Design and Analysis of Algorithms (A+), Principles and methods of program design (A+), Programming Practice (A+), Computer Network (A+), 📖 **Math:** Mathematical Analysis (A+), Linear and Convex Optimization (A+), Information Theory (A+), Complex Analysis (A+), Probability Statistics (A+)
- ▶ **Note:** Pursued a one-year dual degree in Mathematics and Applied Mathematics (discontinued). Completed courses include Complex Analysis, Abstract Algebra, Linear Algebra II.

PUBLICATIONS

• Defining and Extracting Generalizable Interaction Primitives from DNNs

(In submission)

*Lu Chen, Siyu Lou, **Benhao Huang**, Quanshi Zhang*

SJTU XAI-Lab

- Given different DNNs trained for the same task, we develop a method to extract their shared interactions. Experiments show that these shared interactions extracted are reliable concepts instead of noise.
- I was actively involved in the algorithm design and implementation process, and was responsible for the visualization work in the paper. [📄 Paper](#)

EXPERIENCE

• XAI-Lab, SJTU

Shanghai, China

Undergraduate researcher, supervised by Prof. Quanshi Zhang.

Feb 2023 - Current

☰ Artificial Intelligence Interpretability

PROJECTS

• Adaptive Huffman Coding: Analysis and Applications

Shanghai, China

ICE2601 Information Theory Course Project

May 2023

- An Exploration of Adaptive Huffman Coding. I was responsible for the theoretical exploration of adaptive Huffman coding and the attempt to apply adaptive Huffman coding to incremental learning in the CBOW model. [🌐 GitHub](#) [📄 Report](#) [📄 PPT](#)

• Shanghai Jiao Tong University Classroom Information Website

Shanghai, China

ICE2604 Introduction to Software Engineering Course Project

Dec 2022

- A website designed to display classroom data such as seat number, CO2 concentration, temperature, etc. It aims to help student choose a proper self-study classroom. I was responsible for the whole development of the front and back of the website. [🌐 GitHub](#) [📺 Video](#)

• Snake Game: Pixel

Shanghai, China

CS1605 Programming and Practice Course Project

July 2022

- Snake Game implemented with C++ pdcourses.lib. I was responsible for completing the basic mechanics of the game, the design and implementation of game props and AI Snake mode. [🌐 GitHub](#) [📄 PPT](#) [📺 Video](#)

POSITIONS OF RESPONSIBILITY

• Member of the Outreach Department, SJTU Spark Program

Oct 2021 - Sept 2022

• Member of Academic Department, SJTU Student Backbone Training Program

Feb 2023 - Sept 2023

SKILLS SUMMARY

- **Proficient:** Python (PyTorch, NumPy, Manim, etc.), C/C++, Linux, Shell, Verilog, \LaTeX
- **Familiar:** MATLAB, HTML/CSS, JavaScript, Vue/, etc.

HONORS AND AWARDS

• Academic Excellence Scholarship of SJTU (top 10%)

2021/2022

• Rui Yuan-Hong Shan scholarship(20000 ¥, Rank 3/129)

2022

• Shao Qiu scholarship(10000 ¥, Rank 5/129)

2021

• Mathematical Contest In Modeling(Meritorious Winner)

2021